

ABSTRACT OF THE DISCLOSURE

A motion-adaptive interpolation apparatus and method are disclosed. After an image signal is received and horizontal directional inter-frame motion information of a field to be currently interpolated is estimation, and interpolating is suitably performed based on the motion information. According to one aspect of the present invention, a basic unit image region is set for a pizel to be interpolated, a block matching error (BME) is obtained by moving the basic unit image region at certain intervals in a different direction, a linear interpolated pixel value is detected in consideration of the block matching error, and a final interpolation value is calculated and outputted by applying a rule and filtering based on the linear interpolated pizel value. Thus, a picture quality is improved after de-interlacing, and a circuit for implementation of the operation is simplified, so that a unit cost can be reduced.